

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)
2. (Previously Presented) The lower leg prosthesis of claim 42, wherein the elastomeric layer extends fully to a periphery of the lower foot plate.
3. (Previously Presented) The lower leg prosthesis of claim 42, wherein the elastomeric layer comprises an upper portion adjacent the upper foot plate, a lower portion adjacent the lower foot plate and a middle portion disposed between the upper and lower portions.
4. (Original) The lower leg prosthesis of claim 3, wherein the lower portion extends substantially to a periphery of the lower foot plate.
5. (Original) The lower leg prosthesis of claim 3, wherein the lower portion extends substantially to a periphery of the lower foot plate, the upper portion extends generally to a periphery of the upper foot plate and the middle portion extends generally less than the upper foot plate or the lower foot plate in a lateral direction.
6. (Original) The lower leg prosthesis of claim 5, wherein lateral facing sides of the elastomeric layer in the middle portion are generally concave.
7. (Previously Presented) The lower leg prosthesis of claim 3, wherein lateral facing sides of the elastomeric layer in the middle portion are generally convex.
8. (Original) The lower leg prosthesis of claim 3, wherein the lower portion is generally planar in an area extending beyond a periphery of the upper foot plate, and wherein

the middle portion provides a smooth transition between the upper portion and the planar area of the lower portion.

9. (Original) The lower leg prosthesis of claim 3, wherein the middle portion defines a wedge section that extends from a posterior end of the upper foot plate toward a posterior end of the lower foot plate, protruding beyond the posterior end of the upper foot plate.

10. (Currently Amended) The lower leg prosthesis of claim 42, wherein the elastomeric layer bonds the upper foot plate to the lower foot plate.

11. (Original) The lower leg prosthesis of claim 10, wherein the elastomeric layer is the sole bonding between the upper and lower foot plates.

12. (Previously Presented) The lower leg prosthesis of claim 42, wherein the width of the elastomeric layer is generally narrower than the widths of the upper and lower foot plates.

13. (Original) The lower leg prosthesis of claim 12, wherein the elastomeric layer comprises an upper portion adjacent the upper foot plate, a lower portion adjacent the lower foot plate and a middle portion interposed between the upper and lower portions, and wherein the width of the middle portion is generally narrower than the widths of the upper and lower portions.

14. (Previously Presented) The lower leg prosthesis of claim 25, wherein the lower foot plate is formed of a composite material incorporating high-strength fibers.

15-16. (Cancelled)

17. (Previously Presented) The lower leg prosthesis of claim 48, wherein the first gap has a substantially uniform width in the range of 1 to 12 mm.

18. (Cancelled)

19. (Previously Presented) The lower leg prosthesis of claim 49, wherein the second gap has a substantially circular cross-section.

20. (Previously Presented) The lower leg prosthesis of claim 49, wherein the second gap blends smoothly with a lower surface of the upper plate and with upper surfaces of the forefoot and heel plates.

21. (Cancelled)

22. (Previously Presented) The lower leg prosthesis of claim 48, wherein:
the forefoot plate and the heel plate both are formed of a composite material
incorporating high-strength fibers;

the forefoot plate has a thickness that varies along its length, from a maximum at the forefoot plate's anterior end to a minimum at the forefoot plate's posterior end; and

the heel plate has a thickness that varies along the heel plate's length, from a minimum at the heel plate's anterior end to a maximum at the heel plate's posterior end.

23. (Previously Presented) The lower leg prosthesis of claim 42, wherein the elastomeric layer incorporates a solid, high-density polyurethane.

24. (Previously Presented) The lower leg prosthesis of claim 42, wherein the elastomeric layer has a thickness of at least about 2 mm over the outer portion of the lower foot plate.

25. (Currently Amended) A lower leg prosthesis comprising:

an single upper foot plate including an anterior end, a posterior end, an upper forefoot portion at the proximal end, and an upper heel portion at the distal end, wherein the upper heel portion slopes upwardly toward the posterior end of the upper foot plate when the prosthesis is in a mid-stance position having a substantially rigid portion, a portion flexible in a longitudinal direction to define and a sloped upper and lower surfaces at the upper heel portion;

a lower foot plate disposed below and coupled to the upper foot plate such that a space is defined therebetween, the lower foot plate including a lower forefoot portion and a lower heel portion aligned along the a longitudinal axis of the upper foot plate, wherein the sloped upper surface of the upper foot plate slopes downwardly from the lower surface of the upper heel portion toward the forefoot portion slopes upwardly and away from of the an upper surface of the lower heel portion foot plate when the prosthesis is in a mid-stance position to define a space between the lower surface of the upper heel plate and the upper surface of the lower heel plate, and wherein the distance between the respective surfaces is greatest at the posterior end of the upper foot plate; and

an attachment device mounted on the heel portion of the upper foot plate, the attachment device including a lower surface having a mounting portion, wherein the mounting portion that is mounted to contacts and conforms only to the downwardly sloped upper surface of the upper heel portion foot plate, the attachment device further including an upper surface and a mounting protrusion mounted to and extending upwardly from the upper surface of the attachment device adapted for connection to an external prosthetic component, wherein the upper surface of the attachment device is oriented generally horizontally, and the mounting protrusion is oriented generally vertically when the prosthesis is in a mid-stance position.

26-28. (Cancelled)

29. (Previously Presented) The lower leg prosthesis of claim 25, wherein the attachment device comprises a wedge-shaped portion having a generally horizontal upper surface and a lower surface that corresponds to the sloped upper surface of the upper foot plate.

30-31. (Cancelled)

32. (Currently Amended) The lower leg prosthesis of claim 29 ~~30~~, wherein the mounting protrusion comprises a pyramid adapter.

33. (Previously Presented) The lower leg prosthesis of claim 25, wherein the attachment device is bonded to the upper foot plate.

34. (Previously Presented) The lower leg prosthesis of claim 25, wherein the attachment device is bonded to the upper foot plate.

35. (Original) The lower leg prosthesis of claim 25, wherein the attachment device attaches to the upper foot plate using mechanical fasteners.

36. (Currently Amended) The lower leg prosthesis of claim ~~[[3]]~~ 25, wherein the backing component comprises at least one threaded opening and wherein the mechanical fastener threads into the threaded opening.

37. (Original) The lower leg prosthesis of claim 36, wherein the backing component comprises a plurality of threaded openings and wherein a plurality of mechanical fasteners thread into the plurality of threaded openings, respectively.

38. (Original) The lower leg prosthesis of claim 25, wherein the attachment device is formed from one or more of metals, ceramics, composites and plastics.

39. (Original) The lower leg prosthesis of claim 25, wherein the attachment device is configured for weight reduction.

40. (Original) The lower leg prosthesis of claim 39, wherein the attachment device comprises a weight reducing portion formed by removal of material.

41. (Original) The lower leg prosthesis of claim 40, wherein the weight reducing portion comprises a cutout formed in a forward facing portion of the attachment device.

42. (Original) The lower leg prosthesis of claim 25, further comprising an elastomeric layer disposed between the lower foot plate and the upper foot plate.

43. (Original) The lower leg prosthesis of claim 42, wherein the elastomeric layer extends across a substantial portion of an upper surface of the lower foot plate.

44. (Original) The lower leg prosthesis of claim 42, wherein the elastomeric layer extends over a substantial portion of a lower surface of the upper foot plate.

45. (Original) The lower leg prosthesis of claim 42, wherein the upper foot plate comprises an upper surface and a lower surface with the lower surface facing the lower foot plate, and the lower leg prosthesis further comprises a backing component configured for coupling with the attachment device, and wherein the elastomeric layer comprises at least one recess configured to receive the backing component so as to locate the backing component generally adjacent the lower surface of the upper foot plate and generally below the attachment device, the attachment device attached to the upper foot plate by coupling to the backing component.

46. (Original) The lower leg prosthesis of claim 42, wherein the upper foot plate comprises an upper surface and a lower surface with the lower surface facing the lower foot

plate, and the lower leg prosthesis further comprises a backing component configured for placement generally adjacent the lower surface of the upper foot plate and disposed generally below the attachment device and generally within the elastomeric layer, and wherein the attachment device attaches to the upper foot plate using a mechanical fastener coupled to the backing component.

47. (Cancelled)

48. (Previously Presented) The lower leg prosthesis of claim 25, wherein:
the forefoot and heel plates together have a toe section, a mid-foot section, and a heel section; and

the forefoot and heel plates are separated from each other by a first gap located in the mid-foot section.

49. (Previously Presented) The lower leg prosthesis of claim 48, further comprising an elastomeric layer disposed between the lower foot plate and the upper foot plate, with the elastomeric layer-including an anterior section disposed between the upper plate and the forefoot plate and a posterior section disposed between the upper plate and the heel plate, and

wherein a second gap is defined between the anterior and posterior sections, adjacent the first gap.

50. (Original) The lower leg prosthesis of claim 49, wherein the first and second gaps both are substantially straight and oriented substantially perpendicular to the longitudinal axis.

51-52. (Cancelled)

53. (Previously Presented) A lower leg prosthesis comprising:
a curved upper foot plate configured to be flexible in a longitudinal direction;
a lower foot plate disposed below the upper foot plate, the lower foot plate including a

heel portion for accommodating heel strike and including a forefoot plate and a heel plate aligned along a longitudinal axis, with the forefoot and heel plates together having a toe section, a mid-foot section, and a heel section, the forefoot and heel plates separated from each other by a first gap located in the mid-foot section;

an attachment device coupled to the upper foot plate and adapted for connection to an external prosthetic component, the attachment device including a lower surface that generally conforms to a sloping portion of the upper foot plate; and

an elastomeric layer disposed between the lower foot plate and the upper foot plate, the elastomeric layer including an anterior section disposed between the upper plate and the forefoot plate, and a posterior section disposed between the upper plate and the heel plate, wherein a second gap is defined between the anterior and posterior sections, adjacent the first gap.

54. (Cancelled)